

Appl No. 10/785,252  
Response Date: 1/3/06  
Response to Office Action

## **REMARKS/ARGUMENTS**

### **Summary of the Amendment**

Upon entry of the present Amendment, Claims 1-3, 9, and 16 will have been amended, Claims 7 and 15 cancelled, and Claims 21-22 newly added. Accordingly, Claims 1-6, 8-14, and 16-22 are currently pending.

By the present Amendment and Remarks, Applicant submits that the rejections have been overcome, and respectfully requests reconsideration of the Office Action and allowance of the present application at the Examiner's earliest convenience.

### **Summary of the Official Office Action**

#### **Claim Rejections**

Claims 1-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Emoto (US Pat. No. 6,266,073) in view of Lei et al.

The Office Action did not contain a U.S. patent number for the Lei et al. reference. The Examiner was contacted via telephone to obtain the U.S. patent number, and the Examiner indicated the U.S. patent number was 5,968,276. As such, the following remarks and arguments are based on patent number 5,968,276. Applicant respectfully requests the Examiner contact the Applicant's undersigned attorney in the event that Applicant's presumption is incorrect.

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**Traversal of Rejection under 35 U.S.C. 103(a)**

**Rejection of Claims 1-20**

Applicant respectfully traverses the rejection of Claims 1-20 under 35 U.S.C. 103(a) as being unpatentable over Emoto (US Pat No. 6,226,073) [hereinafter "Emoto"] in view of Lei et al. [hereinafter "Lei"].

Independent Claim 1 as amended is directed to an exposure apparatus which exposes a substrate through a pattern of an original plate, comprising a piping made of resin and means for feeding into the piping liquid or gas having a predetermined temperature, wherein the predetermined temperature is set to be between 5 °C and 18 °C.

Applicant respectfully submits that the combined teachings of Emoto and Lei clearly do not teach or suggest any embodiment of an exposure apparatus having the aforementioned features recited in Independent Claim 1.

According to the Office Action, Lei teaches that by controlling the temperature of a gas delivery system in a chemical vapor deposition system, one can prevent side reactions or undesirable depositions. Also, according to the Office Action, Emoto has a means to cool a stage arrangement for a lithographic apparatus. According to the Examiner, one of ordinary skill in the art would have been motivated to control the temperature of the pipe supplying the coolant to the stage in order to prevent the side reaction or undesirable depositions as taught by Lei et al. More specifically, according to the Examiner, one of ordinary skill in the art having the Emoto apparatus would be motivated to prevent unwanted deposits or other undesirable effects by controlling the

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temperature of the piping means and other material that can cause unwanted deposits or out gassing.

Nothing in Emoto or Lei, either alone or in combination, is seen to disclose or describe the present invention's feature of an exposure apparatus comprising at least means for feeding into piping made of resin liquid or gas having a predetermined temperature, wherein the predetermined temperature is set between 5 °C and 18 °C.

Emoto describes an exposure apparatus for transferring a reticle pattern to a wafer, where the apparatus includes a driving system and a temperature adjusting mechanism for controlling the temperature of the driving system. Lei is directed towards providing a method and apparatus for improving thermal management of gases being delivered to a chemical vapor deposition chamber via a gas distribution system / gas delivery system. The thermal management is accomplished using a heat transfer fluid in thermal communication with the deposition gas passageways delivering the gas to the chamber for deposition. According to Lei, this thermal management is necessary to prevent the gas from creating side reactions or undesirable depositions within the gas delivery system.

The invention described in Lei controls the temperature of the gas itself, not the gas-fed tubes. The temperature of the gas needs to be controlled because particulate contamination can occur if the temperature of the gas exceeds a certain level. The unwanted deposits and undesirable effects addressed by the invention of Lei are caused by the gas itself, not by out gassing on the part of the gas-fed tubes.

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In order to establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See Litton Industrial Products v. Solid State Systems, Corp., 755 F. 2d 158, 164, 225 U.S.P.Q. 34, 38 (Fed. Cir. 1985) ("The references fail not only to expressly disclose the claimed invention as a whole, but also to suggest to one of ordinary skill in the art modifications needed to meet all the claim limitations.

Applicant respectfully submits that the combination of Emoto and Lei does not teach or suggest the present invention's claimed feature of at least feeding into piping made of resin liquid or gas having a predetermined temperature, wherein the predetermined temperature is set to be between 5 °C and 18 °C. Rather, the combination of Emoto and Lei is seen to describe a lithographic apparatus with thermo-controlled pipes, wherein the thermo-controlled pipes control the temperature of the gas or gases within the pipes in order to prevent the gas or gases from causing unwanted deposits and undesirable effects within the gas delivery system.

Accordingly, Applicant respectfully submits that since the combination of Emoto and Lei does not disclose or suggests at least the above-noted features of the present invention, the rejection of at least Independent Claim 1 under 35 U.S.C. 103(a) is improper and should be withdrawn for this reason.

Furthermore, Applicant submits that dependent Claims 2-6, 8-14, and 16-20 are allowable for the reason that these claims depend from allowable Independent Claim 1 and because these claims recite additional features that further define the present invention.

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Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejections of dependent Claims 2-6, 8-14, and 16-20 under 35 U.S.C. 103(a) and indicate that these Claims are allowable.

**Newly Added Dependent Claims 21-22**

Applicant submits that newly added dependent Claims 21-22 are allowable for the reason that these claims depend from allowable Independent Claim 1 and because the claims recite additional features that further define the present invention.

Accordingly, Applicant requests that the Examiner indicate that these Claims are allowable.

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### **CONCLUSION**

In view of the foregoing, it is submitted that none of the references of record, when considered alone or in any proper combination thereof, anticipate or render obvious Applicant's invention as recited in Claims 1-6, 8-14, and 16-22. The applied references of record have been discussed and distinguished, while significant claim features of the present invention have been pointed out.

Applicant respectfully submits that each and every pending claim of the present application meets the requirements for patentability under 35 U.S.C. 103. Accordingly, allowance of the present application and all the claims therein is respectfully requested and believed to be appropriate.

Further, any amendments to the claims which have been made in this response and which have not been made to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

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Applicant's undersigned attorney may be reached at our Irvine, California office at (949) 932-3329. All correspondences should continue to be directed to our below-listed address.

Respectfully submitted



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